In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously Presented) A method of time scale modification of a digital audio signal comprising the steps of:

analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount S_a;

selecting a base overlap S_s for output synthesis corresponding to a desired time scale modification;

calculating a cross-correlation R[k] for index value k between overlapping frames for a range of overlaps between $S_s + k_{min}$ to $S_s + k_{max}$ for only a fixed length overlap region less than an entire overlapping region;

selecting a value K yielding the greatest cross-correlation value R[k];

synthesizing an output signal in a set of second equally spaced, overlapping time windows having a second overlap amount equal to $S_s + K$.

2. (Currently Amended) ~~The~~ A method of ~~claim 1, wherein~~ time scale modification of a digital audio signal comprising the steps of:

analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount S_a;

selecting a base overlap S_s for output synthesis corresponding to a desired time scale modification;

~~said step of~~ calculating the cross-correlation R[k] for index value k between overlapping frames for a range of overlaps between $S_s + k_{min}$ to $S_s + k_{max}$ for only a fixed length overlap region less than an entire overlapping region ~~employs~~ employing the equation

$$R[k] = \sum_{i=initial\_x}^{final\_x} sign\{y[mS_s + i + k]\} \cdot sign\{x[mS_a + i]\}$$

where: x[i] is the analysis of the input signal for index value i; y[i] is a synthesis signal for the index value i;

selecting a value K yielding the greatest cross-correlation value R[k];

synthesizing an output signal in a set of second equally spaced, overlapping time windows having a second overlap amount equal to S_s + K.

3. (Original) The method of claim 1, wherein:

said step of calculating the cross-correlation R[k] employs only a center half of the overlap region for k = 0.

4. (Previously Presented) A digital audio apparatus comprising:

a source of a digital audio signal;

a digital signal processor connected to said source of a digital audio signal programmed to perform time scale modification on the digital audio signal by

analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount,

selecting a base overlap S_s for output synthesis corresponding to a desired time scale modification,

calculating a cross-correlation R[k] for index value k between overlapping frames for a range of overlaps between $S_s + k_{min}$ to $S_s + k_{max}$ for only a fixed length overlap region less than an entire overlapping region;

selecting a value K yielding the greatest cross-correlation value R[k],

synthesizing an output signal in a set of second equally spaced, overlapping time windows having a second overlap amount equal to S_s + K; and

an output device connected to the digital signal processor for outputting the time scale modified digital audio signal.

5. (Currently Amended) ~~The~~ A digital audio apparatus ~~of claim 4, wherein~~ comprising:

a source of a digital audio signal;

a digital signal processor connected to said source of a digital audio signal programmed to perform time scale modification on the digital audio signal by

analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount,

selecting a base overlap S_s for output synthesis corresponding to a desired time scale modification,

~~said digital signal processor is programmed to calculate the~~ calculating a cross-correlation R[k] for index value k between overlapping frames for a range of overlaps between $S_s + k_{min}$ to $S_s + k_{max}$ for only a fixed length overlap region less than an entire overlapping region ~~employs~~ employing the equation

$$R[k] = \sum_{i=initial\_x}^{final\_x} sign\{y[mS_s + i + k]\} . sign\{x[mS_a + i]\}$$

where: x[i] is the analysis of the input signal for index value i; y[i] is a synthesis signal for the index value i~~;~~,

selecting a value K yielding the greatest cross-correlation value R[k],

synthesizing an output signal in a set of second equally spaced, overlapping time windows having a second overlap amount equal to $S_s + K$; and

an output device connected to the digital signal processor for outputting the time scale modified digital audio signal.

6. (Original) The digital audio apparatus of claim 4, wherein:

said digital signal processor is programmed to calculate the cross-correlation R[k] employing only a center half of the overlap region for k = 0.